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Staff:	Tiffany S. Tauber
Staff Report:	June 23, 2000
Hearing Date:	July 14, 2000
Commission Action:	

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.:	1-99-063
APPLICANT:	California Department of Fish and Game
PROJECT LOCATION:	Mad River Slough Wildlife Area, off of Old Samoa Road, southwest of Arcata, Humboldt County (APNs 506-031-05, 506-041-02)
PROJECT DESCRIPTION:	Enhance existing wetlands by: (1) excavating segments of McDaniel slough to create six ponds varying in size from 0.3 to 2.2 acres, (2) upgrading/installing eleven water control structures, (3) creating 140 acres of short-grass habitat and 85 acres of tall grass habitat, and (4) planting 7 acres of riparian vegetation. Excavated spoil material will be deposited over 5,503 linear feet of existing roads, and over 6,194 linear feet of the top of the Humboldt Bay levee.
GENERAL PLAN DESIGNATION:	Agriculture Exclusive

ZONING DESIGNATION: Agriculture Exclusive 60-acre-minimum

LOCAL APPROVALS RECEIVED: None Required

OTHER APPROVALS REQUIRED: Army Corps of Engineers

SUBSTANTIVE FILE DOCUMENTS: Humboldt County LCP

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends approval with special conditions of the proposed wetland enhancement project. The project would increase the availability of seasonal water and create a diversity of wetland habitats at the Mad River Slough Wildlife Area, located at the north end of Humboldt Bay, southwest of the City of Arcata in Humboldt County. The proposed project involves dredging and filling within wetlands including: 1) excavating 21,500 cubic yards of material from the edge of the slough channels to create six shallow ponds, 2) placing 66 cubic yards of fill in the slough to install water control structures, and 3) placing 400 cubic yards of temporary fill to access the top of the Humboldt Bay levee for spoil disposal. The project is an allowable use for dredging and filling of wetlands because it is for a restoration purpose intended to enhance wetland habitat values at the site consistent with Coastal Act Section 30233(a)(7).

The proposed project is intended to benefit the environment by enhancing wetland habitat values. However, to ensure that the proposed project does not result in unintended significant adverse impacts to coastal resources and actually enhances wetland habitat values consistent with the resource protection provisions of Section 30233 and 30240, the Commission attaches Special Condition Nos. 1-4. These recommended conditions require that: (1) a final monitoring plan be submitted for review and approval by the Executive Director to ensure that the goals and objectives of the enhancement project are met, (2) no spoil material or other construction related debris be placed in coastal waters or wetlands and that all temporary fill and existing road crossing fill be removed, (3) construction activities occur between August 15th and November 15th to prevent conflicts with the primary wildlife breeding season at the site, and (4) the applicant obtain appropriate project approval from the U.S. Army Corps of Engineers.

As conditioned, staff has determined that the proposed development would be consistent with the Chapter 3 policies of the Coastal Act.

STAFF NOTES:

1. Standard of Review

The proposed project is located in the Commission's retained jurisdiction. Humboldt County has a certified LCP, but the site is within an area shown on State Lands Commission maps over which

the state retains a public trust interest. Therefore, the standard of review that the Commission must apply to the project is the Chapter 3 policies of the Coastal Act.

I. MOTION, STAFF RECOMMENDATION AND RESOLUTION:

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve Coastal Development Permit No. 1-99-063 pursuant to the staff recommendation.

STAFF RECOMMENDATION OF APPROVAL:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS: See Attachment A.

III. SPECIAL CONDITIONS:

1. Final Monitoring Program

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit for review and written approval of the Executive Director, a final detailed monitoring program designed by a qualified wetland biologist for monitoring of the wetland enhancement site. The monitoring program shall at a minimum include the following:

a. Performance standards that will assure achievement of the restoration goals and objectives set forth in coastal Development Permit Application No. 1-99-063 as

summarized in the "Background" section of Finding 1, "Site and Project Description," and shall include but not be limited to the following standards: (a) increases in waterfowl use of the wildlife area from October through April, (b) increases in shorebird feeding and resting use, (c) increases in wading bird use, (d) increases in raptor use, and (e) increases in riparian vegetation.

- b. Provisions for monitoring at least the following attributes: (a) increases in waterfowl use of the wildlife area from October through April, (b) increases in shorebird feeding and resting use, (c) increases in wading bird use, (d) increases in raptor use, and (e) increases in riparian vegetation at the following frequency: biannually for five years using methods such as: transects, photo plots, and bird counts.
- c. Provisions for submittal within 30 days of completion of the initial enhancement work of (1) "as built" plans demonstrating that the initial enhancement work has been completed in accordance with the approved enhancement program, and (2) an assessment of the initial biological and ecological status of the "as built" enhancements. The assessment shall include an analysis of the attributes that will be monitored pursuant to the program, with a description of the methods for making that evaluation.
- d. Provisions to ensure that the mitigation site will be remediated within a year of a determination by the permittee or the Executive Director that monitoring results indicate that the site does not meet the goals, objectives, and performance standards identified in the approved enhancement program and in the approved final monitoring program.
- e. Provisions for monitoring and remediation of the enhancement site in accordance with the approved final enhancement program and the approved final monitoring program for a period of five years.
- f. Provisions for submission of annual reports of monitoring results to the Executive Director by a particular date each year for the duration of the required monitoring period, beginning the first year after submission of the "as-built" assessment. Each report shall include copies of all previous reports as appendices. Each report shall also include a "Performance Evaluation" section where information and results from the monitoring program are used to evaluate the status of the wetland enhancement project in relation to the performance standards.
- g. Provisions for submission of a final monitoring report to the Executive Director at the end of the five-year reporting period. The final report must be prepared in conjunction with a qualified wetlands biologist. The report must evaluate whether the enhancement site conforms with the goals, objectives, and performance standards set forth in the approved final enhancement program. The report must address all of the monitoring data collected over the five-year period.

- B. If the final report indicates that the enhancement project has been unsuccessful, in part, or in whole, based on the approved performance standards, the applicant shall submit a revised or supplemental enhancement program to compensate for those portions of the original program which did not meet the approved performance standards. The revised enhancement program shall be processed as an amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.
- C. The permittee shall monitor and remediate the wetland enhancement site in accordance with the approved monitoring program. Any proposed changes from the approved monitoring program shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines no amendment is legally required.

2. Construction Responsibilities and Debris Removal

The permittee shall comply with the following construction-related requirements:

- (a) No construction materials, debris, or waste shall be placed or stored where it may be subject to entering waters of Humboldt Bay or McDaniel slough;
- (b) Any and all spoil material resulting from construction activities shall be deposited in the approved upland locations including the existing roadways and the top of the Humboldt Bay levee. Disposal material shall not extend beyond the existing prism of the roads or levee.
- (c) Any and all temporary fill associated with the ditch crossing used to access the Humboldt Bay levee shall be removed within 30 days of project completion and the ditch shall be recontoured and revegetated to its condition that existed prior to the placement of the fill.
- (d) All construction debris including old culverts and debris from the six existing slough crossings identified by the applicant in the attached Exhibit No. 3 for removal shall be removed and disposed of in an upland location outside of the coastal zone or at an approved disposal facility.

3. Timing of Construction

To avoid adverse impacts to wildlife during prime breeding season, all project construction shall occur between August 15th and November 15th. Planting of riparian vegetation shall occur during the rainy season between November and March to optimize planting success.

4. U.S. Army Corps of Engineers Approval

PRIOR TO COMMENCEMENT OF CONSTRUCTION, the permittee shall provide to the Executive Director a copy of a permit issued by the Army Corps of Engineers, or letter of permission, or evidence that no permit or permission is required. The applicant shall inform the Executive Director of any changes to the project required by the Army Corps of Engineers. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

1. Site & Project Description

The Department of Fish and Game proposes to enhance existing wetlands to provide greater habitat value and diversity for water-associated wildlife at the Mad River Slough Wildlife Area (MRSWA). The proposed site is located at the north end of Humboldt Bay between Old Samoa Road and Humboldt Bay just west of the City of Arcata, Humboldt County. The project site includes the westernmost 265 acres of the 478 acres of fallow pastureland that comprise the Wildlife Area. The site is relatively flat and is bisected by multiple channels of McDaniel Slough and by two existing gravel roads. With the exception of the roads, buildings, and levees, the entire site is considered seasonal wetland. Five historic structures exist on the site including two unoccupied residences and three wooden barns. The buildings are not a part of the proposed project and will not be impacted by the project. (see Exhibit Nos. 1 & 2)

Humboldt Bay and the surrounding agricultural lands provide habitat for a variety of wildlife. The MRSWA is habitat for waterfowl, shorebirds, wading birds, songbirds, and raptors. A smaller number of mammals, amphibians and reptiles also inhabit the area. Two species of fish occur in the project vicinity including the tidewater goby, a federally listed endangered species, and coast cutthroat trout, a California species of special concern. The state listed endangered peregrine falcon (recently federally delisted) is also present at the site. Other avian species known to commonly roost and forage at the site include northern harrier, white-tailed kite, and short-eared owl.

The primary plant species at the site are mostly exotic species typical of wet pastures including: velvet grass, annual bluegrass, dock, Canada thistle, and bird's foot trefoil. Bulrush sedge, Pacific silverweed, brass buttons, duckweed, and fat hen, are among the other wetland plants that occur within the sloughs and lower, wetter areas. There are no rare or threatened plants within the project area.

Background

The MRSWA site was historically part of the extensive tidal marshes of Humboldt Bay, but was converted to agricultural use following the construction of a levee around this portion of Humboldt Bay in 1886. The site was farmed and grazed until 1987. In 1987, the area was acquired by the California Department of Fish and Game (DFG) with Proposition 19 Bond funds intended specifically for the acquisition of coastal wetlands.

Like many of the historic tidelands around Humboldt Bay, the project area was never fully drained following the construction of the Bay levee and therefore, the vast majority of the project site remains seasonal wetland. Although the land is now a state wildlife area, much of the site has not yet been enhanced to improve wetland habitat values. At the time of acquisition, DFG's common practice was to remove cattle from wildlife area lands because of perceived conflicts with wildlife values. When the area was acquired by DFG in 1987, grazing ceased and consequently, the vegetation grew to be tall and rank, and a dense mat of dead vegetation developed over much of the ground surface. This dense, tall vegetation provides habitat for some wildlife at the site, but precludes use of the area by many water-associated wildlife species. In recent years the presence of water-associated wildlife on the MRSWA has noticeably decreased. Brood counts and duck banding activities in recent years have shown the use of the area by ducks, shorebirds, and gulls to be extremely low. For example, three surveys completed in the Fall of 1999 recorded primarily song birds and raptors on the site. In 1998, the California Waterfowl Association, in coordination with DFG, applied for and received a grant to implement enhancement activities on several north coast Wildlife Areas, including the Mad River Slough Wildlife Area.

The MRSWA Management Plan identifies objectives for enhancing habitat values at the site and states,

“Factors limiting wildlife use include the lack of vegetative diversity and the duration of time standing water is present. Vegetative diversity can be increased by restoring riparian cover and controlled livestock grazing at relatively low cost. Wetlands can be enhanced by holding run-off water from winter rains in shallow ponds.”

To meet these management objectives, the Department of Fish and Game (DFG) proposes to perform activities that would enhance wetland habitat values and has set forth the following project goals:

- Provide shallow fresh or brackish water ponds for waterfowl from October through April;
- Maintain water in all interior sloughs through the waterfowl nesting season
- Provide approximately 200 acres of short grass vegetative type suitable for shorebird feeding and resting use;
- Maintain a mixture of pastures, ponds and sloughs to encourage optimum use by wading birds;
- Develop and maintain suitable nesting and roosting habitat for wading birds;

- Increase the area's raptor prey base;
- Provide nesting and perching trees for raptors; and
- Restore riparian vegetation on selected interior sloughs.

Pursuant to these goals, the project would enhance approximately 260 acres of coastal wetland habitat and increase the biological diversity of the MRSWA. Proposed enhancement activities include: 1) excavating areas of existing slough channels to create 7.5 acres of shallow ponds; 2) installing/upgrading eleven water control structures; 3) establishing 140 acres of short grass habitat adjacent to 85 acres of tall grass habitat; and 4) planting 7 acres of riparian vegetation. Water would remain on the surface of the project area longer each year as a result of constructing shallow ponds and water control facilities. The establishment of short grass pasture and riparian vegetation would increase the number and diversity of species that use the area. The proposed wetland enhancement project is expected to attract shorebirds, wading birds, and waterfowl to the area. As waterfowl and shorebird numbers increase, the prey base for raptors and other predators would also increase. (see Exhibit Nos. 3 & 4)

Detailed Description of Project Components

(a) Site Preparation

The site would be prepared for enhancement and vegetation management by burning the existing vegetation to eliminate coarse plant material, rejuvenate plant growth, and expose debris hazards to construction equipment. Burning would be conducted by the California Department of Forestry and Fire Protection (CDF) in the late summer under its Vegetation Management Program. A patch of Himalaya blackberry (*Rubus sp.*) is located in the southeastern section of the project area and is an active white-tailed kite roost. The kite roost would be protected from fire with a 50-foot-wide buffer around the berry patch. Concerns about smoke pollution would be coordinated with CDF and the North Coast Unified Air Quality Management District.

(b) Widening of Slough Channels and Creation of Ponds

Segments of existing slough channels would be widened into six ponds varying in size from 0.3 to 2.2 acres for a total of approximately 7.5 acres. These areas would be excavated to an average depth of two feet with a 5:1 bank slope, typical of the existing slough channels, by means of bulldozer, excavator and/or scraper. Creation of the ponds would result in approximately 21,515 cubic yards of excavated spoil material. (Exhibit No. 5)

(c) Disposal of Excavated Material

The approximately 21,515 cubic yards of excavated material would be placed in two upland locations on the site including the gravel roads and the Humboldt Bay levee. The existing gravel roads would be raised approximately two feet by placing the excavated material on top of the existing fill prism over 5,503 linear feet of roads. Raising and improving the roads would ensure that they are accessible throughout the year to access water control structures for water management

purposes. The roads also act as berms to maintain standing water on the area longer and the roads provide topographic relief for wildlife. (Exhibit No. 7)

The material not used for road improvement would be deposited on the top of the Humboldt Bay levee, raising it an average of 18 inches over a distance of approximately 6,194 feet. The levee would be accessed by temporary ditch crossings adjacent to the levee at each end of the area where excavation spoils would be deposited. The crossings would be constructed over a 36-inch culvert with backfill to the culvert, and would be removed at the completion of the project. The drainage ditch would be restored to its original contour and any bare areas planted with grass. (Exhibit Nos. 8, 9, & 10)

(d) Water Control Structures

Water levels on the project would be managed by eleven water control structures at various locations within existing sloughs. These structures would consist of earthen berms containing an 18-inch plastic culvert that would allow water to pass through the berm. The up-slough end of each culvert would be filled with a box riser with a flash board water control device that could be raised or lowered to hold or release water. Nine of the eleven water control structures would use existing earthen berms that were previously used for slough crossings. Two new berms for water control structures with a culvert and riser would be placed at previously unfilled locations. The total fill for these new water control structures would cover approximately 880-square-feet of area and require approximately 66 cubic yards of wetland fill. Six other earthen slough crossings would be removed. Elimination of these crossings would remove approximately 2,640- square-feet of wetland fill, or about 196 cubic yards. (Exhibit No. 6)

(e) Vegetation Management

After burning the site for preparation as described above, the DFG proposes to utilize agricultural practices such as mowing and grazing to manage the approximately 140 acres closest to Old Samoa Road for short grass habitat. Approximately 85 acres of pasture nearest the Bay levee would be allowed to reestablish and would be managed for tall grass habitat. Regrowth of vegetation to 12 inches in height or more would take between four and six months depending on winter rain. The area managed for tall grass habitat would be fenced for protection from grazing. (Exhibit No. 4)

(f) Riparian Vegetation Enhancement

Approximately seven acres of riparian vegetation, including red alder and Hooker willows, would be planted near Old Samoa Road along the westernmost slough channel in the northwestern corner of the MRSWA. This would establish an area of riparian habitat and draw a diversity of riparian species to the site as the vegetation matures. (Exhibit No. 4)

2. Protection of the Wetland Environment

Section 30233 of the Coastal Act states that the diking, filling, or dredging of wetlands shall be permitted only when there is no feasible less environmentally damaging alternative, and only when

feasible mitigation measures have been provided to minimize adverse environmental effects. Section 30233 also specifies that diking, filling, or dredging are allowed in wetlands only for limited uses. In addition, Coastal Act Section 30231 provides in applicable part that the biological productivity and the quality of coastal waters be maintained and restored where feasible by protecting natural vegetation buffer areas near riparian habitats and by minimizing alteration of natural streams.

The proposed project involves excavation of approximately 20,500 cubic yards of material that would be placed on upland areas on-site including the existing roads and the top of the Humboldt Bay levee. According to the Commission's staff biologist, the roads have been historically filled for vehicle access across the site and do not currently qualify as wetlands. Approximately 66 cubic yards of fill will be placed within the slough channel for water control structures and an additional 400 cubic yards of temporary fill placed for access to the top of the Humboldt Bay levee for spoil disposal. A total of approximately 196 cubic yards of wetland fill associated with existing road crossings would be removed.

Section 30233(a) provides as follows, in applicable part:

- (a) *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
- (1) *New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
 - (2) *Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
 - (3) *In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.*
 - (4) *In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*

(5) *Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

(6) *Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*

(7) *Restoration purposes.*

(8) *Nature study, aquaculture, or similar resource dependent activities.*

(C) In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary...

The above policies set forth a number of different limitations on what types of projects may be allowed in coastal wetlands. For analysis purposes, the limitations applicable to the subject project can be grouped into four general categories or tests. These tests are:

1. The purpose of the filling, diking, or dredging is for one of the eight uses allowed under Section 30233;
2. that feasible mitigation measures have been provided to minimize adverse environmental effects;
3. that the project has no feasible less environmentally damaging alternative; and
4. that the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible.

(a) Allowable Use for Dredging and Filling of Coastal Waters

The first test set forth above is that any proposed filling, diking or dredging must be for an allowable purpose as specified under Section 30233 of the Coastal Act. One of the allowable purposes for diking, filling, or dredging, under Section 30233(a)(7) is "restoration purposes." As discussed in detail above, the proposed wetland enhancement project requires dredging of wetlands to create ponds, placement of fill or diking in wetlands for water control structures, and placement of temporary fill to access the top of the levee. The Commission finds wetland enhancement projects, where the sole purpose of the project is to improve wetland habitat values, to constitute "restoration purposes" pursuant to Section 30233(a)(7). For example, the Commission concurred with a consistency determination for a wetland enhancement project proposed by the U.S. Fish and Wildlife Service at the Humboldt Bay National Wildlife Refuge (CD-33-92). This project similarly involved dredging, diking, and filling of wetlands to create and enlarge shallow ponds and sloughs and replace water control structures and was approved as a "restoration purpose" under Section

30233(a)(7). Another similar wetland enhancement project approved by the Commission as a "restoration purpose" under Section 30233(a)(7) involved the excavation of six acres of Doran Park Marsh to create a new tidal pond wildfowl foraging area at the southeast end of Bodega Harbor, Sonoma County (CDP #1-93-04). The proposed project, solely intended to enhance wetland habitat values on the Mad River Slough Wildlife Area, is considered a "restoration purpose" and is allowable under Section 30233.

This finding that the proposed diking, filling, and dredging constitutes "restoration purposes" is based, in part, on the assumption that the proposed project will be successful in increasing wetland habitat values. Should the project be unsuccessful at increasing wetland habitat values, or worse, if the proposed diking, filling, and dredging impacts of the project actually result in long term degradation of the habitat, the proposed diking, filling, and dredging would not actually be for "restoration purposes." To ensure that the project achieves the wetland enhancement objectives for which the project is intended, the Commission attaches Special Condition No. 1. Special Condition No. 1 requires the applicant to submit a final monitoring plan for review and approval by the Executive Director prior to the issuance of the coastal development permit. The monitoring plan is required to outline a method for measuring and documenting the improvements in habitat value and diversity at the site, including wildlife and plant species and abundance, over the course of five years following project completion. Furthermore, Special Condition No. 1 requires the monitoring plan to include provisions for remediation to ensure that the goals and objectives of the wetland enhancement project are met.

The Commission finds that as conditioned, the proposed dredging and filling in coastal wetlands for the proposed wetland enhancement project falls in the category of "restoration purposes," and therefore is an allowable use pursuant to Section 30233(a)(7) of the Coastal Act.

(b) Adequate Mitigation Measures

The second test set forth by Section 30233 is that adequate mitigation must be provided for adverse environmental impacts. Potential significant adverse impacts often associated with dredging or filling in coastal wetlands include: (1) the coverage of bottom habitat and the loss of wetland surface area and volume, (2) impacts to sensitive and/or riparian vegetation, (3) impacts to fish and wildlife habitat, and (4) water pollution in the form of sedimentation or debris entering coastal waters. Overall, the project would enhance wetland habitat values and would produce generally only beneficial environmental effects. However, the proposed project has been conditioned to ensure that potential significant adverse impacts are minimized.

i) Wetland Area

A potential significant adverse impact resulting from dredging or filling in wetlands is the coverage of bottom habitat and the loss of wetland surface area and volume. As discussed in the Project Description Finding, the proposed wetland enhancement project would involve the excavation of approximately 21,500 cubic yards of material from the edge of the slough channels to create shallow water ponds. The project also involves the placement of 66 cubic yards of fill in the slough

channel to construct two of eleven water control structures and the temporary placement of approximately 400 cubic yards of wetland fill to create ramps to access the Bay levee for spoil disposal.

The project would result in an increase of approximately 7.5 acres of surface water to provide increased habitat for water-associated wildlife including shorebirds and wading birds. The excavated material would be deposited in upland locations and would not result in a loss of wetland surface area or volume. Wetland impacts resulting from fill associated with new water control structures would be adequately compensated for by the removal of six existing road crossings totaling 196 cubic yards of wetland fill for an overall reduction of wetland fill at the site. In addition, the temporary fill associated with accessing the levee would have only a minor short-term effect on wildlife values by removing about .01 acre of wetland habitat for up to four weeks.

To ensure that the project does not result in the loss of wetland surface area or volume, the Commission attaches Special Condition No. 2 which requires all excavated material to be placed on-site in upland locations including the existing roads and the top of the Humboldt Bay levee as proposed by the applicant, rather than in wetland locations. Special Condition No. 2 also requires the removal of the temporary fill associated with accessing the levee following project completion and requires the removal of the six road crossings as proposed by the applicant.

ii) Vegetation

The project would remove some wetland vegetation in the areas to be excavated and converted to shallow water ponds. The DFG Natural Diversity Data Base identifies sensitive species including Humboldt Bay owl's-clover and Point Reyes bird's-beak as being located within the project vicinity. However, a recent plant survey conducted at the site did not find either of these sensitive species. An increase in the quantity and diversity of wetland-associated plant species would naturally occur as the area becomes wet for longer periods each year. In addition, seven acres of riparian vegetation consisting primarily of Hooker willow and red alder would be planted and an increase in riparian-associated wildlife species would occur as riparian habitat matures.

iii) Fish and Wildlife

Two species of fish occur in the project vicinity including the tidewater goby, a federally listed endangered species, and coast cutthroat trout, a California species of special concern. However, the tidewater goby is an estuarine species and the project site has been closed to estuarine exchange for over 100 years by creation of the levee and tidegates that separate the area from Humboldt Bay. Although coast cutthroat trout inhabit Janes Creek which is connected to the sloughs on the project site, the use of the dead-end sloughs on the site by cutthroat trout has not been documented. Therefore, the proposed project would not adversely effect either of these fish species.

Of the 265 acres on the project site, approximately 85 acres would be managed as tall grass, about 140 acres would be converted to short grass, and 7 acres would be planted with riparian vegetation. The remaining 33 acres includes the slough channels and the existing five structures mentioned in

the Site Description finding. Managing vegetation as described above on the MRSWA would change the use of the area by a number of species. Foraging, nesting, and roosting habitat for raptors such as the white-tailed kite, northern harrier and short-eared owl would be reduced by the conversion of 140 acres of tall vegetation to short grass pasture. However, this impact is not considered significant because the 208 acres of tall grass adjacent to the project site within the MRSWA would remain. In addition, raptor species such as peregrine falcon, merlin and red-tailed hawk would benefit from the creation of 140 acres of short grass foraging habitat. A variety of other bird species including shorebirds and geese would have increased foraging opportunity as short grass habitats are developed. Although increases in bird species would be the most notable in the area, post-project conditions would also favor increases in mammals, reptiles, amphibians, and invertebrates.

The project would also increase the quantity, depth, and duration of water on the MRSWA and would promote an increase in diversity of wildlife habitat and abundance of water-associated wildlife. Increased annual duration of shallow water, short vegetation and low gradient pond edges would attract shorebirds and foraging Canada geese. Expanses of open water adjacent to tall vegetation would benefit migratory waterfowl by providing feeding and resting habitat, while resident waterfowl would have potential nesting cover and brood water. The increase in open water and marsh habitat is also expected to draw herons, egrets, and American coot. Emergent vegetation within ponds would provide cover for rails and nest structure for red-winged blackbirds and marsh wrens. Predators such as river otter, mink, peregrine falcon, and merlin would benefit indirectly by an increase in food sources.

While the intended purpose of the proposed project is to enhance habitat values of the existing wetlands, the project would result in short-term impacts to existing wetland vegetation and seasonal wetland habitat. The project involves excavating approximately 20,500 cubic yards of material from the edge of the slough channel to create 7.5 acres of shallow ponds. The excavation would temporarily eliminate some wetland vegetation and seasonal wetland habitat from the areas to be excavated. However, if the project achieves its enhancement goals, wetland habitat values would be greatly expanded and the short-term impacts of the excavation would be fully mitigated.

To ensure that the project achieves the wetland enhancement objectives for which the project is intended and thereby mitigates for the short term loss of wetland habitat resulting from the proposed excavation work, the Commission attaches Special Condition No. 1. Special Condition No. 1 requires the applicant to submit a final monitoring plan for review and approval by the Executive Director prior to the issuance of the coastal development permit. The monitoring plan is required to outline a method for measuring and documenting the improvements in habitat value and diversity at the site, including wildlife and plant species and abundance, over the course of five years following project completion. Furthermore, Special Condition No. 1 requires the monitoring plan to include provisions for remediation to ensure that the goals and objectives of the wetland enhancement project are met.

In addition, to ensure that project construction activities do not interfere with the breeding season for some species present at the site, the Commission attaches Special Condition No. 3 to limit

construction activities to occur only between August 15th and November 15th as proposed by the Department of Fish and Game. The riparian vegetation planting is required to occur during the rainy season to optimize planting success.

iv) Water Quality

Potential adverse impacts to coastal waters could occur in the form of sedimentation or debris from project excavation and filling being allowed to enter coastal waters. To ensure that adverse impacts to water quality do not occur, the Commission attaches Special Condition No. 2. Special Condition No. 2 requires that no construction materials, debris, or waste be placed or stored where it could be subject to entering the waters of Humboldt Bay or McDaniel slough. In addition, Special Condition No. 2 requires all spoil material to be deposited in approved upland locations including the existing roads and the Humboldt Bay levee.

The Commission finds that the proposed wetland enhancement project is a permitted use under Section 30233 of the Coastal Act, and that as conditioned, all potential adverse impacts have been minimized to the maximum extent feasible.

(c) Alternatives Analysis

The third test set forth by Section 30233 is that the proposed dredge or fill project must have no feasible less environmentally damaging alternative. In this case, the Commission has considered the various alternatives presented by DFG and determines that there is no feasible less environmentally damaging alternative to the project as conditioned by Special Conditions No. 1-4. A total of four possible alternatives to the proposed project have been identified including: (1) restoring tidal action, (2) sealing existing tidegates, (3) creating ponds above grade, and (5) the no project alternative.

Breaching the Humboldt Bay Dike

As discussed previously, the subject site, and much of the bottomlands surrounding Humboldt Bay, were cut off from tidal action over 100 years ago by the construction of levees to drain the land for agricultural uses. Breaching the levees would restore tidal action to the area and would allow for the reestablishment of salt marsh habitat. While this alternative would more effectively restore historic environmental conditions at the site, breaching the levee would also flood adjacent private lands and public roads. New levees would need to be constructed to protect surrounding areas and contain the tidal action to the subject site. The construction of new levees would require extensive wetland fill and would be extremely costly. Therefore, breaching existing levees to restore tidal action is not a feasible less environmentally damaging alternative.

Sealing the Tide Gates

A primary method of restoring and enhancing wetlands is to increase the water surface and holding capacity of the land. Sealing the existing tidegates at the subject site to prevent water from draining to Humboldt Bay would keep standing water on the site longer and would meet that objective of the

proposed project. However, without the ability to manage water levels at the relatively flat site, rising water would eventually flood adjacent property owners and public roads. Similar to the option discussed above, new levees would need to be constructed to contain water on the MRSWA and prevent flooding of adjacent lands and would require costly wetland fill. Therefore, sealing the tidegates to hold water on the site is not a feasible less environmentally damaging feasible alternative.

Construction of New Dikes to Create Ponds Above Grade

As noted above, restoring and enhancing wetlands at the MRSWA requires increasing the water surface and holding capacity of the land. One method of accomplishing this would be to construct new levees on the site that would act as berms to hold water for longer periods of time. However, this alternative would also require extensive placement of wetland fill. The proposed project actually results in a reduction of wetland fill. Therefore, constructing new levees to create ponds above grade is not a less environmentally damaging feasible alternative.

No Project

The "no project" alternative would leave the MRSWA in its current condition with tall, rank vegetation and limited areas of standing water throughout the year. The "no project" alternative would eliminate the opportunity for increased habitat diversity and increased species abundance at the Wildlife Area. Therefore, the no project alternative is not a less environmentally damaging feasible alternative as it would not accomplish the project objectives of enhancing wetland habitat values at the MRSWA.

Conclusion

Based on the alternatives analysis above, the Commission concludes that the proposed project, to excavate slough channels to create shallow ponds below grade, is the least environmentally damaging feasible alternative for enhancing wetland habitat values at the site and is consistent with Section 30233.

3. Public Access

Section 30212 of the Coastal Act requires that access from the nearest public roadway to the shoreline be provided in new development projects except where it is inconsistent with public safety, military security, or protection of fragile coastal resources, or adequate access exists nearby. Section 30211 requires that development not interfere with the public's right to access gained by use or legislative authorization. In applying Sections 30211 and 30212, the Commission is also limited by the need to show that any denial of a permit application based on these sections, or any decision to grant a permit subject to special conditions requiring public access, is necessary to avoid or offset a project's adverse impact on existing or potential access.

The entire Mad River Slough Wildlife Area is open to the public with the exception of the Bay levee and the five structures on the site. The MRSWA is open to the public year-round for wildlife-related activities such as bird watching, kayaking, hunting (pursuant to applicable seasons and regulations), research, and education. Activities that are not compatible with wildlife, such as off-road vehicle riding, are not allowed at the site. The proposed project does not involve any changes or additional restrictions to existing public access including during project construction. In fact, public use of the site is expected to increase after the project as a result of increased wildlife abundance and diversity. Sufficient parking exists to accommodate the current level of public use as well as the anticipated increase in use following project completion.

Therefore, the Commission finds that the proposed project would not have an adverse effect on public access, and that the project as proposed without new public access is consistent with the requirements of Coastal Act Sections 30210, 30211, and 30212.

4. Agricultural Resources

The Coastal Act sets forth policies that relate to the protection of agricultural land and limit the conversion of agricultural lands to non-agricultural uses. Sections 30241 and 30242 address methods to be undertaken to maintain the maximum amount of prime agricultural land in production and to minimize conflicts between agricultural and urban land uses.

Prior to the DFG's acquisition of the site in 1987, the site was a ranch used for agricultural purposes, mainly as grazing land. In addition, according to information submitted by the DFG, based on Soils of Western Humboldt County, California (McLaughlin and Harradine, 1965) soils are graded 1 through 6. Soils in the 1 and 2 grades are considered very good soils and are identified as prime agricultural soils. Soils in grades 5 and 6 are considered poor agricultural soils. The soils on the MRSWA (Bayside 2 soil series) have a grade of 4. They are heavy bay formed clays with extremely poor drainage and are identified as having some of the poorest drainage in the county. These soils are therefore, not prime agricultural soils. The DFG ceased using the property for agricultural practices sometime after acquiring the property. The acquisition of the property by the DFG did not require a coastal development permit.

According to the Humboldt County certified LCP, the subject site is planned and zoned Agriculture Exclusive. However, the site is within the Commission's retained jurisdiction and therefore, the standard of review is the Coastal Act rather than the LCP. Although the site is managed for fish and wildlife habitat rather than for agriculture, the proposed project does not constitute a conversion of agricultural land. The DFG plans to reintroduce grazing on a portion of the site as a means of managing short-grass habitat on approximately 140 acres. Furthermore, the restoration of wetland habitat values over other portions of the site would be compatible with agricultural use of adjacent lands.

Therefore, the Commission finds that the proposed project does not constitute a conversion of agricultural lands and is consistent with Sections 30241 and 30242 of the Coastal Act.

5. U.S. Army Corps of Engineers Approval

The project requires review and approval by the U.S. Army Corps of Engineers. Pursuant to the Federal Coastal Zone Management Act, any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. Under agreements between the Coastal Commission and the U.S. Army Corps of Engineers, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification for the project or approves a permit. To ensure that the project ultimately approved by the Corps is the same as the project authorized herein, the Commission attaches Special Condition No. 4 which requires the permittee to submit to the Executive Director evidence of U.S. Army Corps of Engineers approval of the project prior to the commencement of work.

6. California Environmental Quality Act (CEQA)

Section 13096 of the Commission's administrative regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing that the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

As discussed above, the proposed wetland enhancement project, as conditioned, has been found to be consistent with the policies of the Coastal Act. As specifically discussed in these above findings which are hereby incorporated by reference, mitigation measures which would minimize or avoid all significant adverse environmental impact have been required. These mitigation measures require that : (1) a final monitoring plan be submitted for review and approval by the Executive Director to ensure that the enhancement project goals and objectives are met, (2) no spoil material or other construction related debris be placed in coastal waters or wetlands and that all temporary fill and existing road crossing fill be removed, (3) construction activities only occur between August 15th and November 15th to prevent conflicts with the primary breeding season at the site, and (4) the applicant obtain appropriate project approval from the U.S. Army Corps of Engineers. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity would have on the environment.

Therefore, the Commission finds that the proposed project as conditioned to mitigate the identified potential impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

Exhibits:

1. Regional Location
2. Vicinity Map
3. Site Plan
4. Vegetation Site Plan
5. Pond Design (1 of 6)
6. Water Control Structure (Typical)
7. Road Fill (Typical)
8. Levee Fill Area
9. Temporary Ditch Crossing
10. Levee Fill (Typical)

ATTACHMENT A

Standard Conditions:

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.
4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

A B C D E F G H I J K L M N O

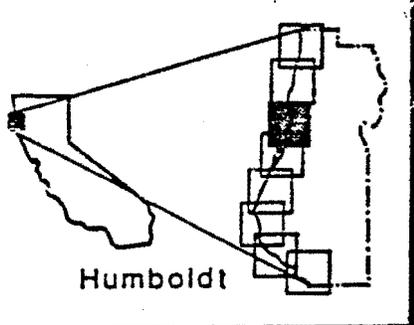
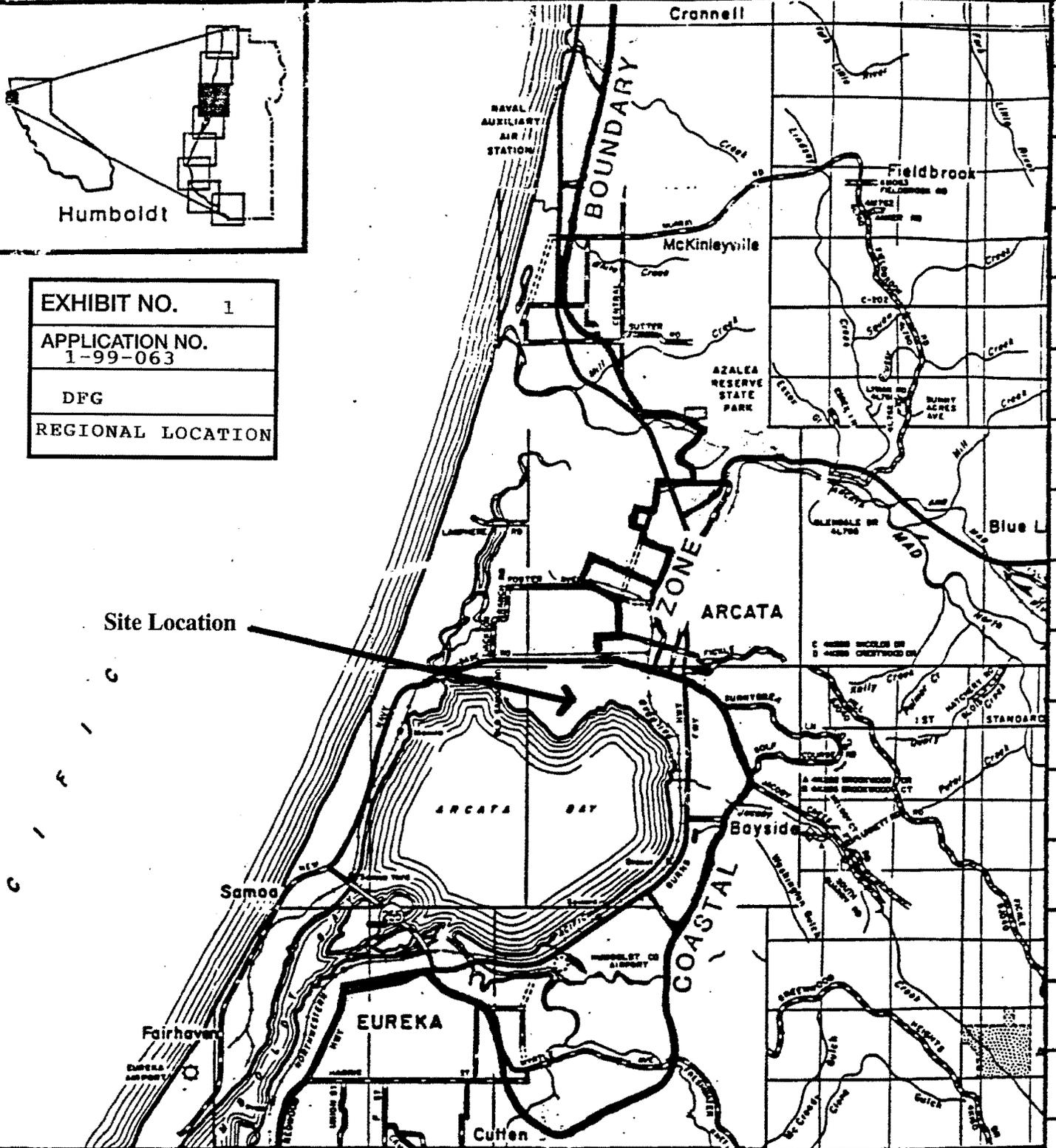
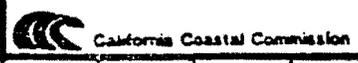


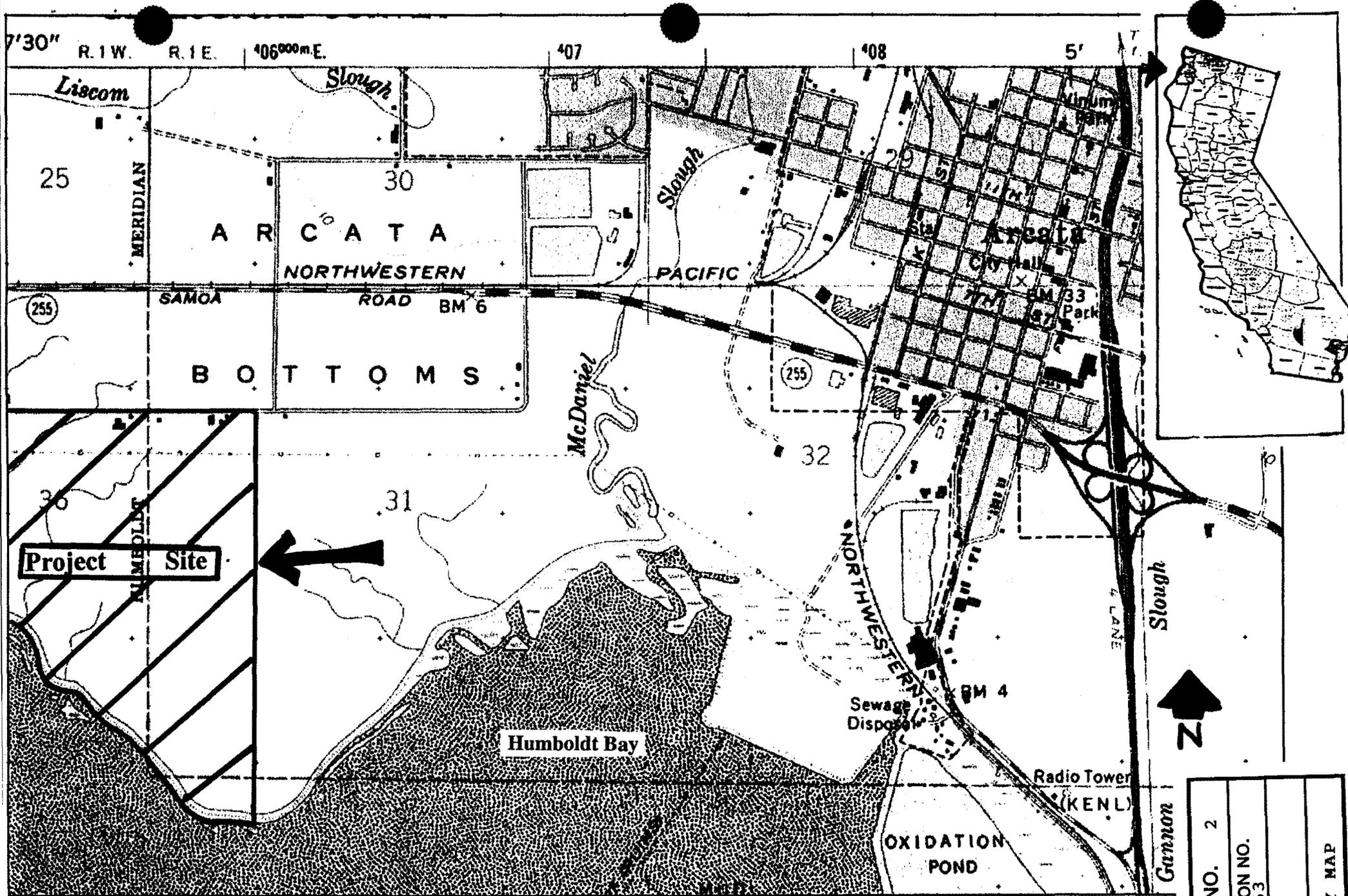
EXHIBIT NO.	1
APPLICATION NO.	1-99-063
DFG	
REGIONAL LOCATION	

Site Location



LOCATION MAP





Name: ARCATA SOUTH
 Date: 1/21/99
 Scale: 1 inch equals 1333 feet

Location: 040° 51' 46.8" N 124° 06' 00.0" W
 Caption: Locational Map

EXHIBIT NO.	2
APPLICATION NO.	1-99-063
DFG	
VICINITY MAP	

**1999 Wetland Enhancement Project
Mad River Slough Wildlife Area
Engineer Design**

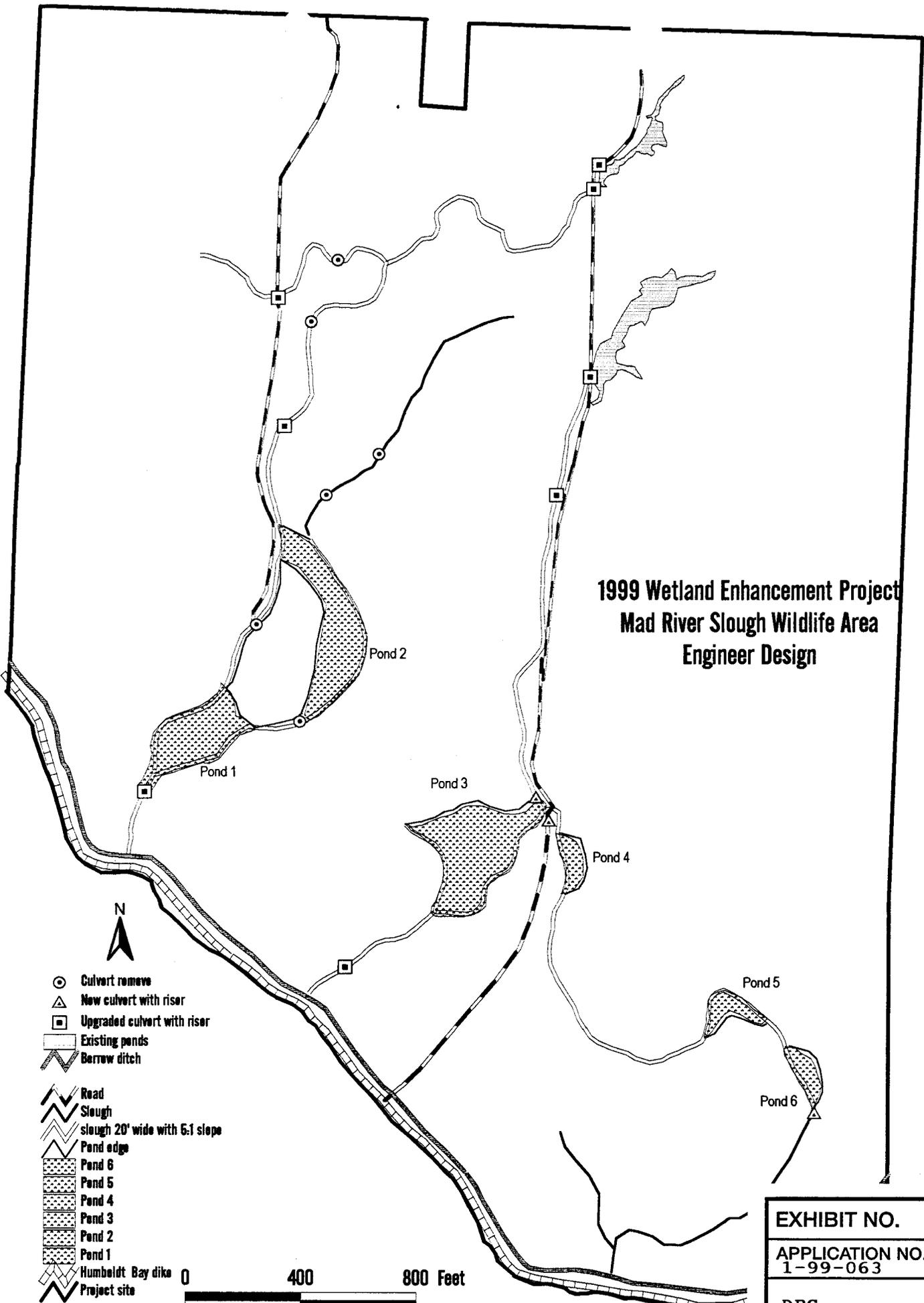
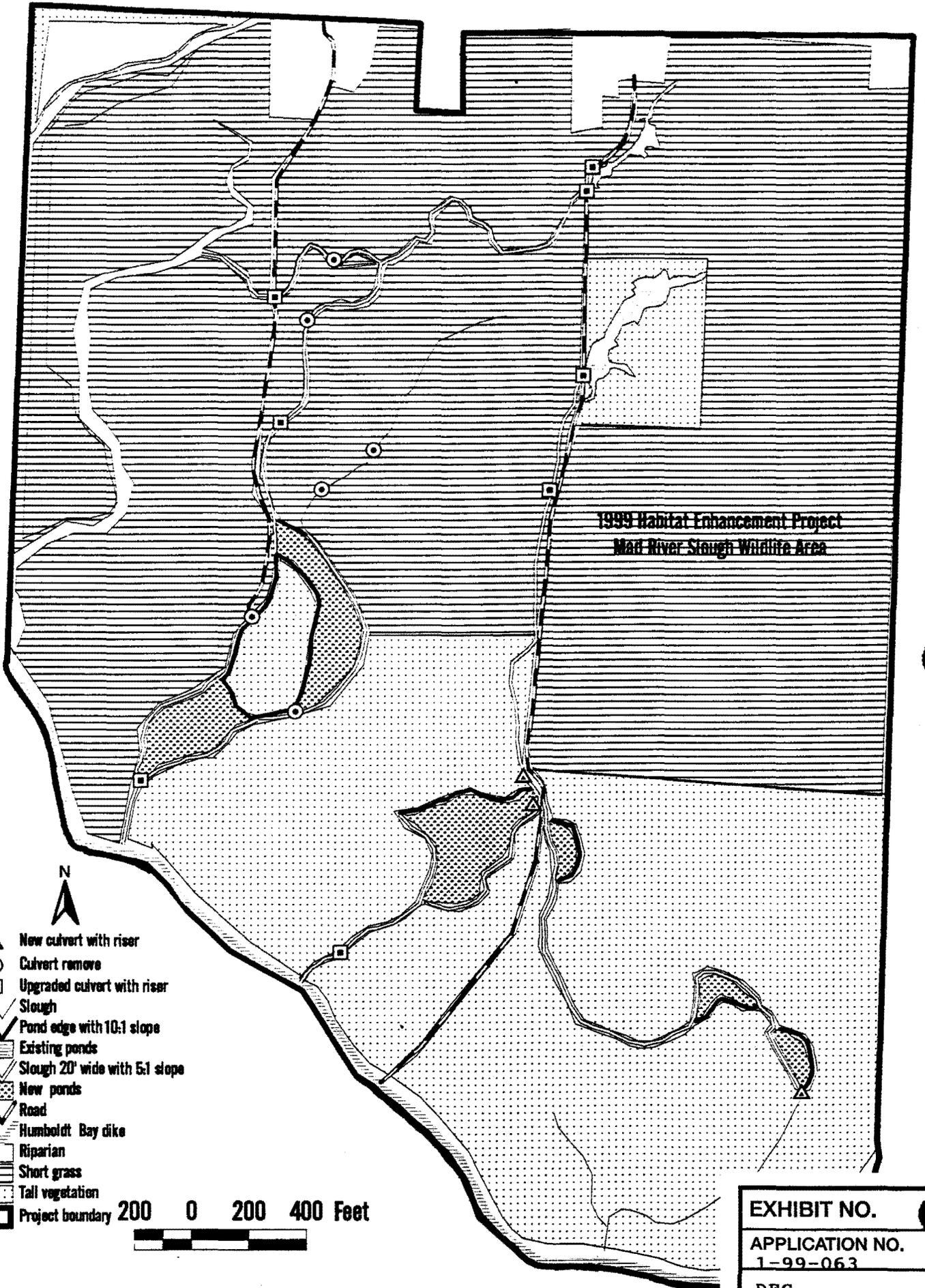


EXHIBIT NO.	3
APPLICATION NO.	1-99-063
DFG	
SITE PLAN	



**1999 Habitat Enhancement Project
Mad River Slough Wildlife Area**

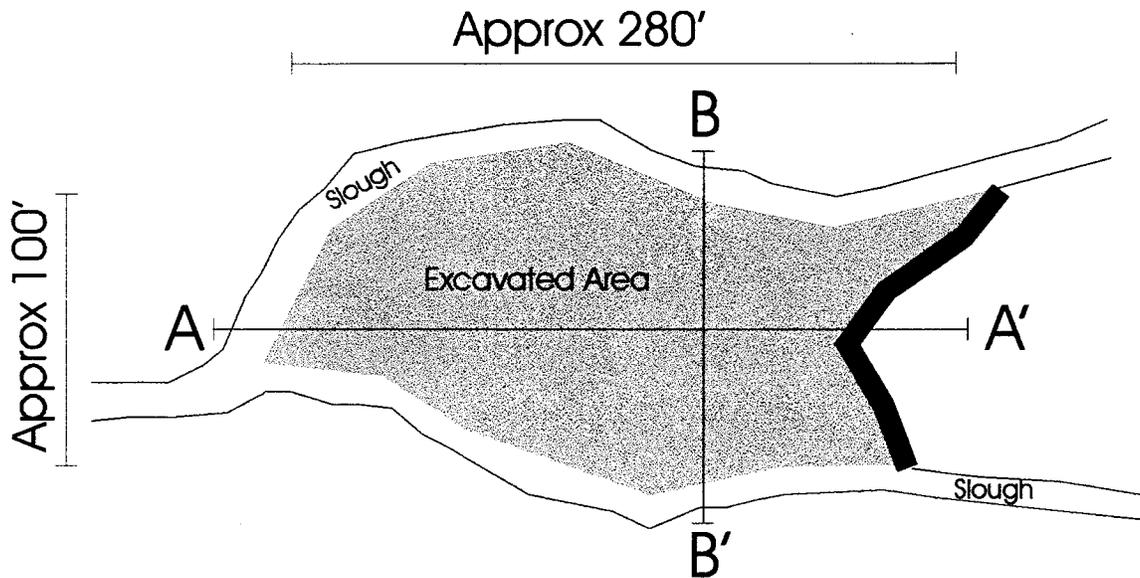
- △ New culvert with riser
- ⊙ Culvert remove
- ◻ Upgraded culvert with riser
- Slough
- ▲ Pond edge with 10:1 slope
- ▨ Existing ponds
- ▧ Slough 20' wide with 5:1 slope
- ▩ New ponds
- Road
- ▨ Humboldt Bay dike
- ▨ Riparian
- ▨ Short grass
- ▨ Tall vegetation
- ▭ Project boundary



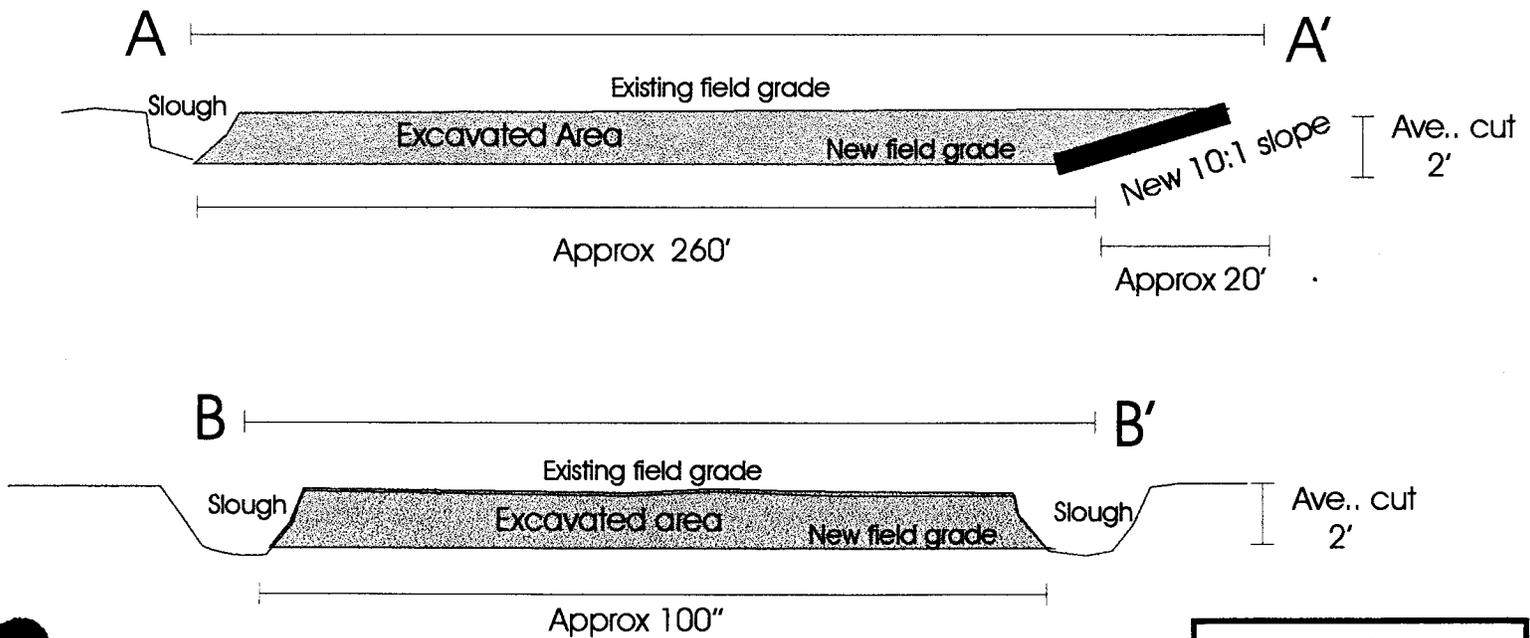
EXHIBIT NO.
APPLICATION NO. 1-99-063
DFG
VEGETATION SITE PLAN

Pond 1 Design

Top View



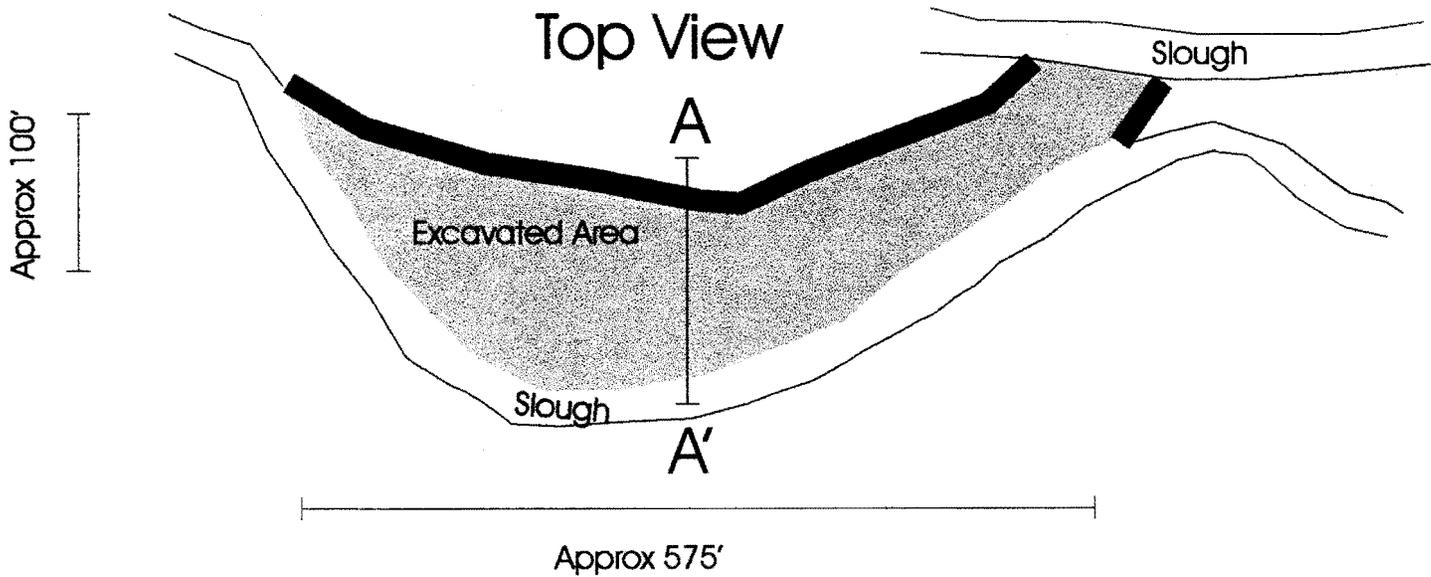
Cross Sections



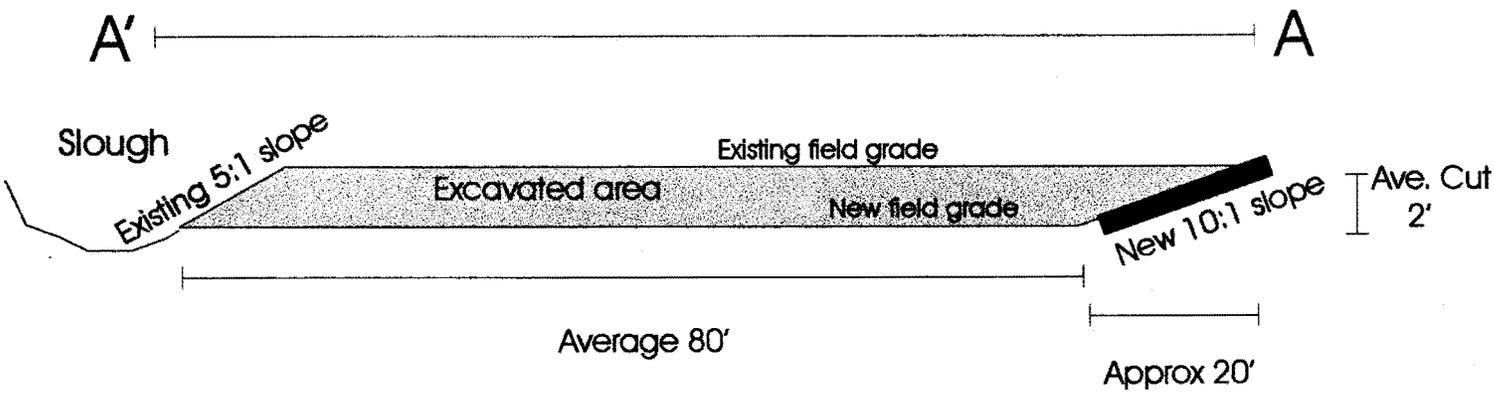
NOTE: Drawings not to scale!

EXHIBIT NO.	5
APPLICATION NO.	1-99-063
DFG	
POND DESIGN	(1 of 6)

Pond 2 Design

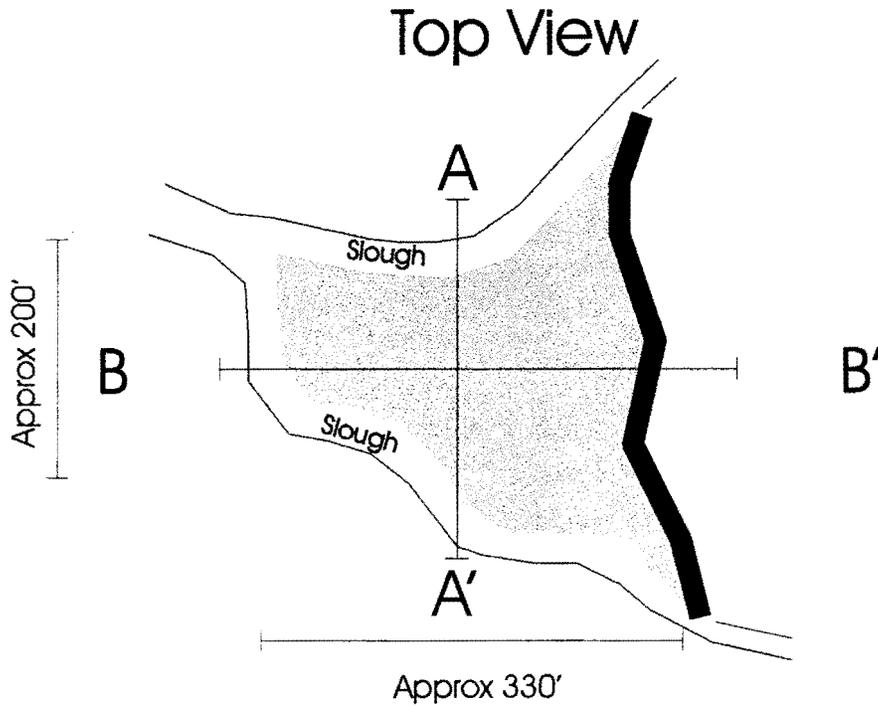


Cross Section

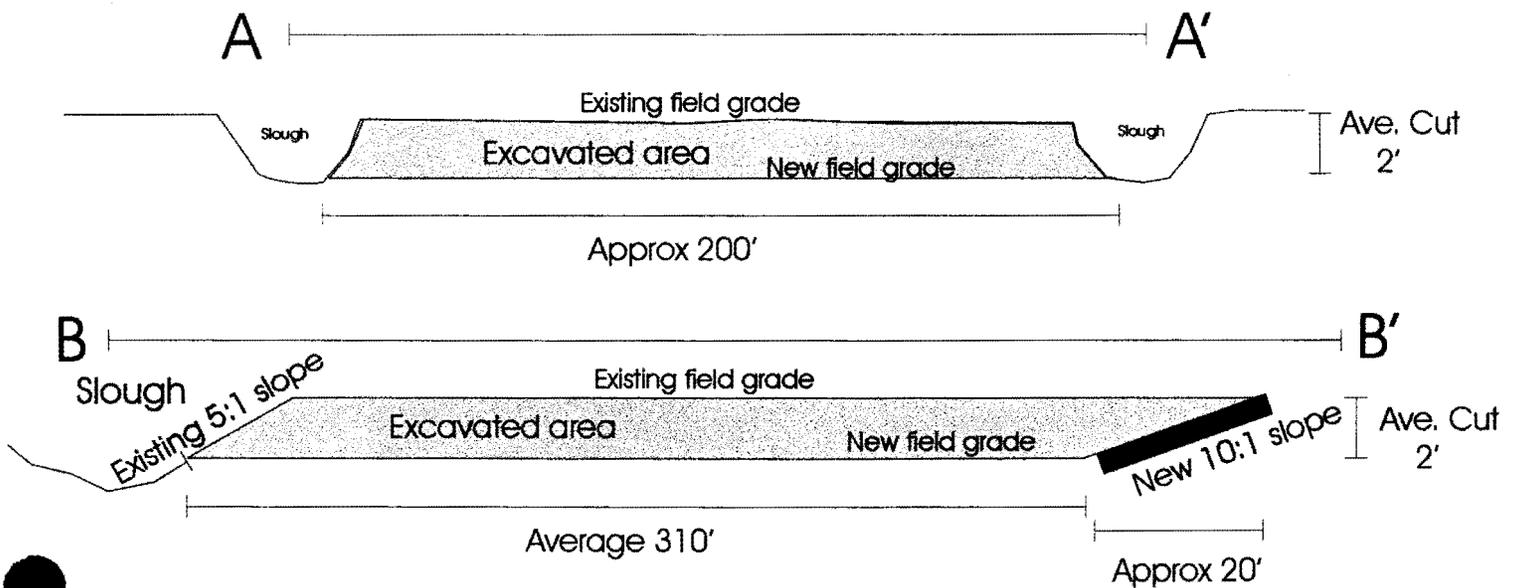


NOTE: Drawings not to scale!

Pond 3 Design



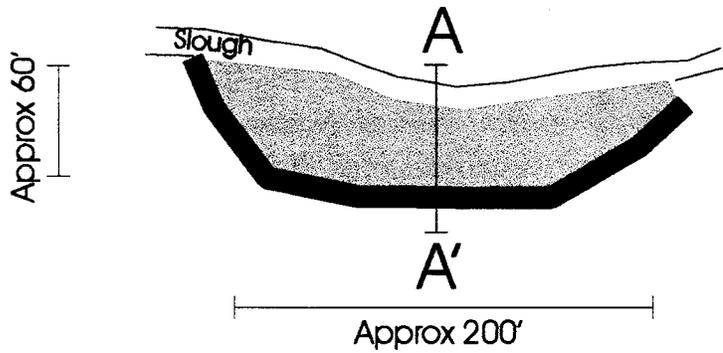
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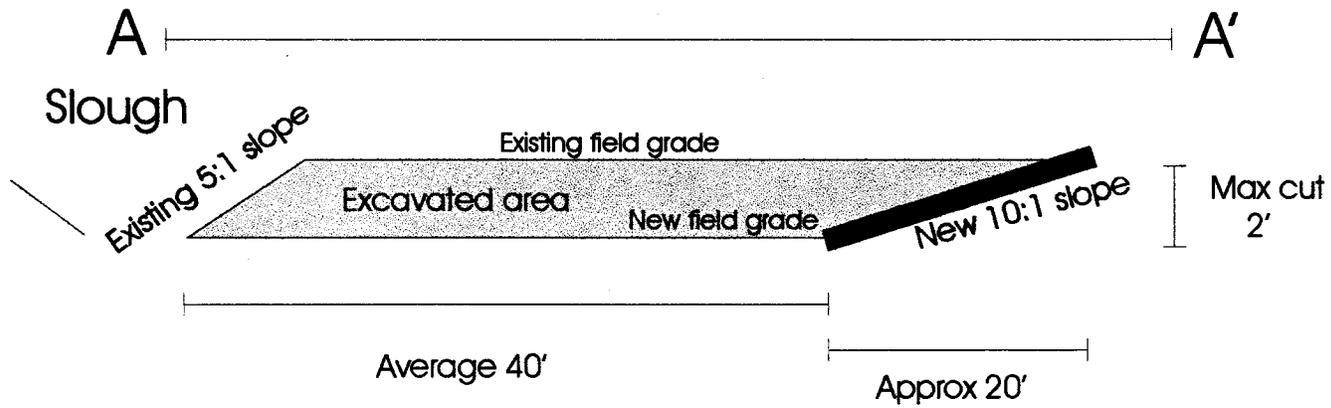
NOTE: Drawings not to scale!

Pond 4 Design

Top View



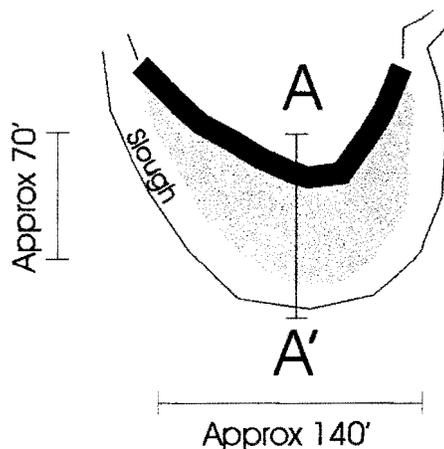
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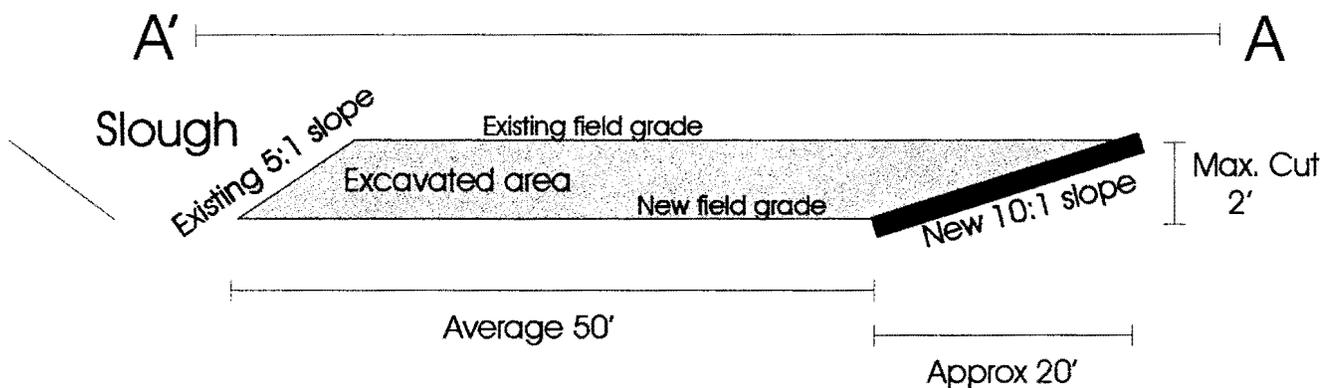
NOTE: Drawings not to scale!

Pond 5 Design

Top View



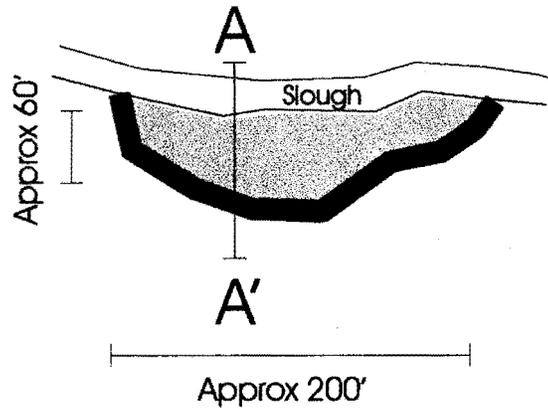
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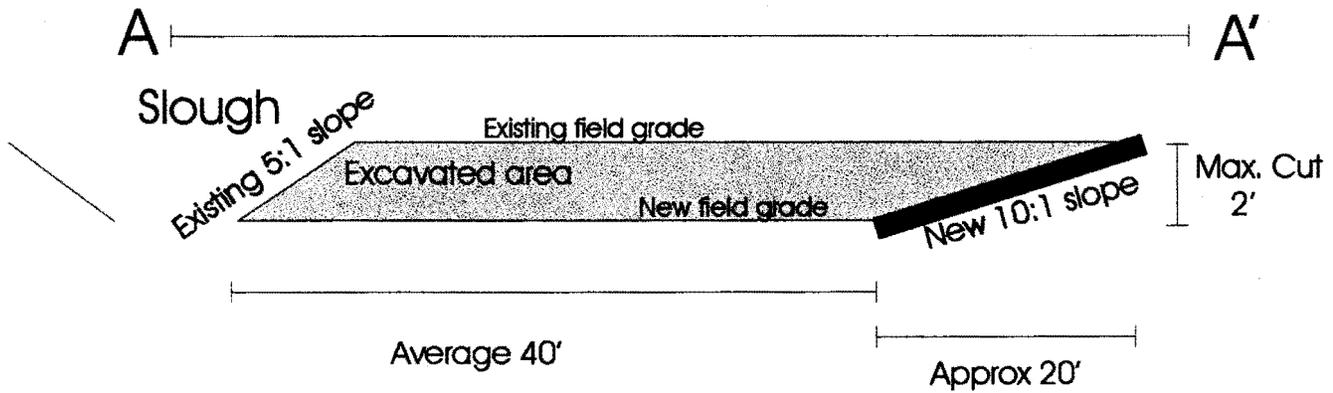
NOTE: Drawings not to scale!

Pond 6 Design

Top View



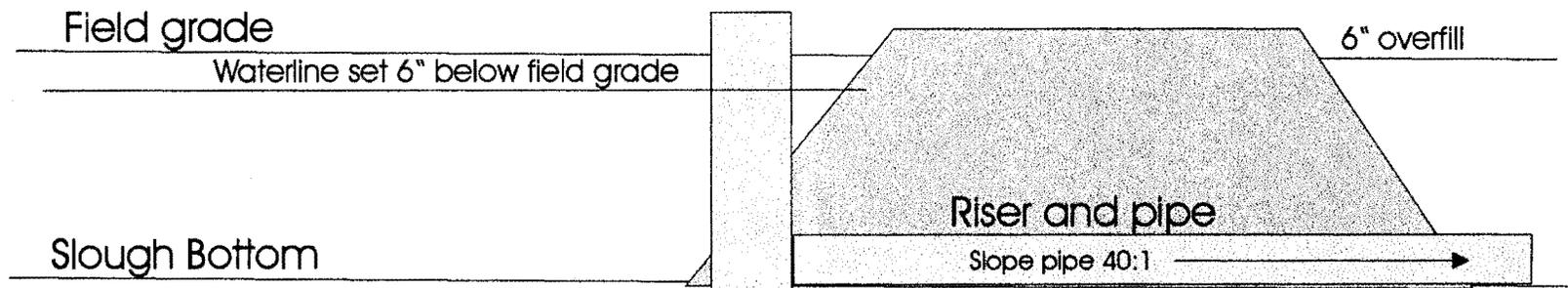
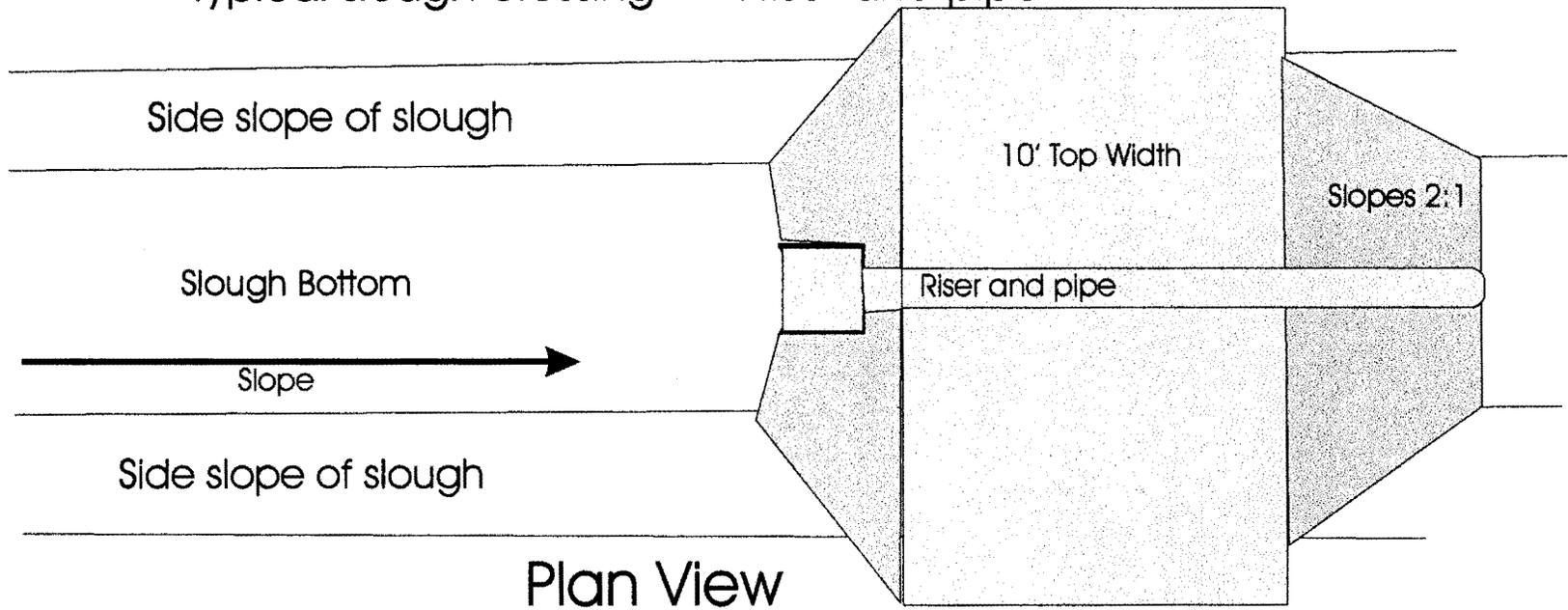
Cross Section



NOTE: Drawings not to scale!

MAD RIVER SLOUGH WETLAND ENHANCEMENT PROJECT

Typical slough crossing with riser and pipe



Cross Section

NOTE: Drawings Not To Scale

EXHIBIT NO.	6
APPLICATION NO.	1-99-063
DFG	
WATER CONTROL STRUCTURE (TYPICAL)	

Mad River Slough Wildlife Area Typical Road Cross Section

Addendum Figure 1

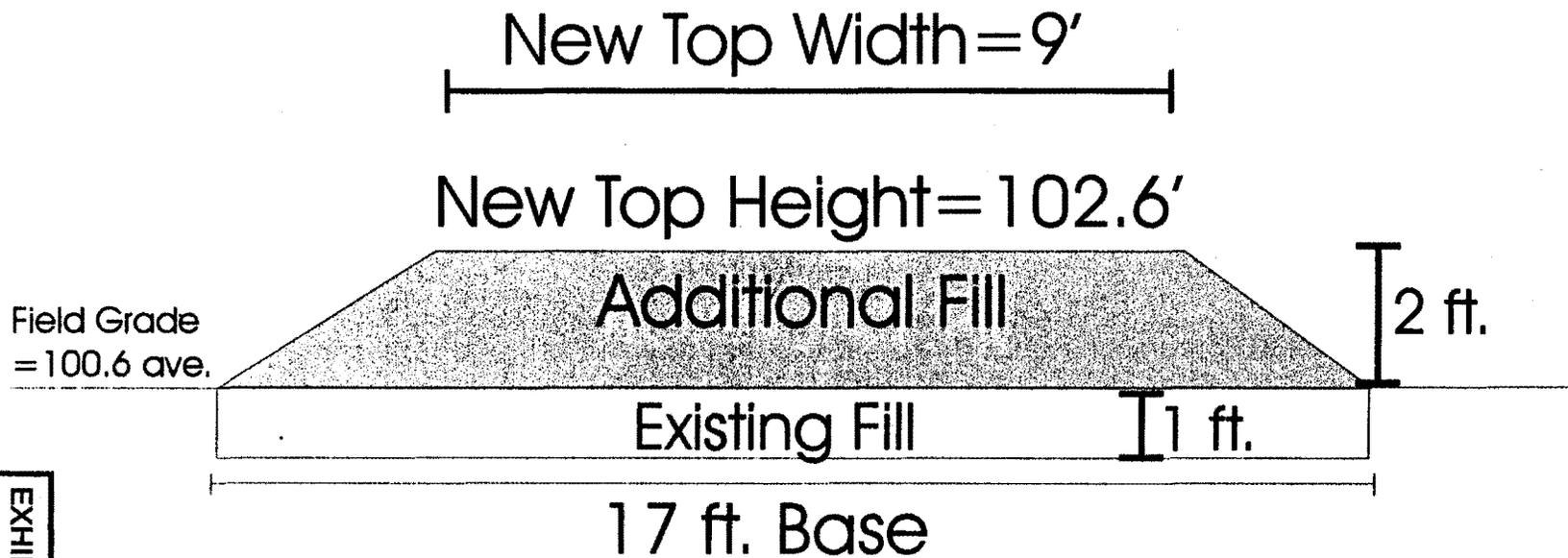
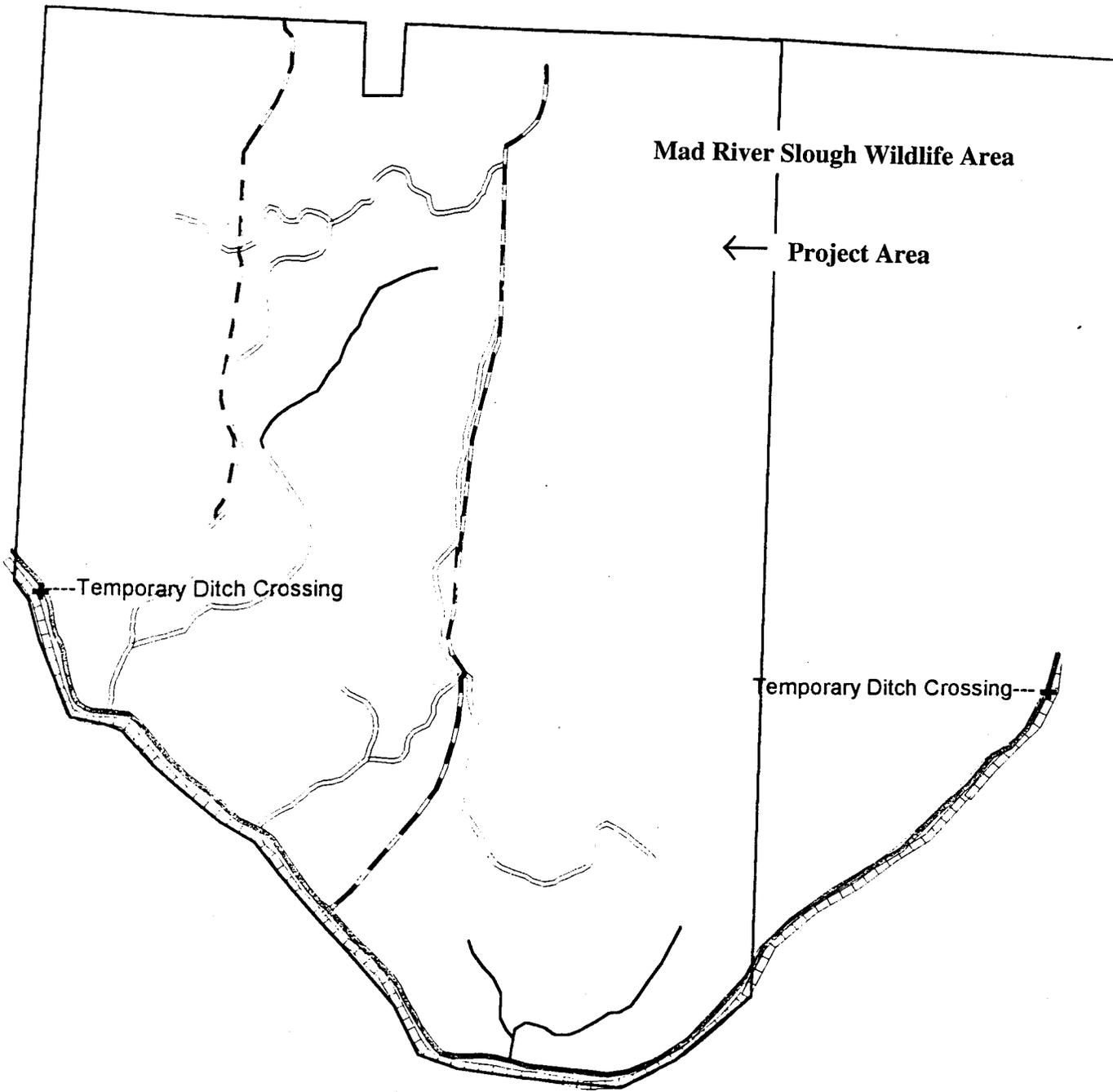


EXHIBIT NO.	7
APPLICATION NO.	1-99-063
DFG	
ROAD FILL (TYPICAL)	

Mad River Slough Wildlife Area 1999 Wetland Enhancement Project



- + Temp ditch crossing
- Project Boundary
- Borrow ditch
- Road
- Slough
- Slough 20' wide with 5:1 slope
- Levee section where spoils will be set

EXHIBIT NO.	8
APPLICATION NO.	1-99-063
DFG	
LEVEE FILL AREA	

Mad River Slough Wildlife Area Temporary Ditch Crossing Typical Cross Sections

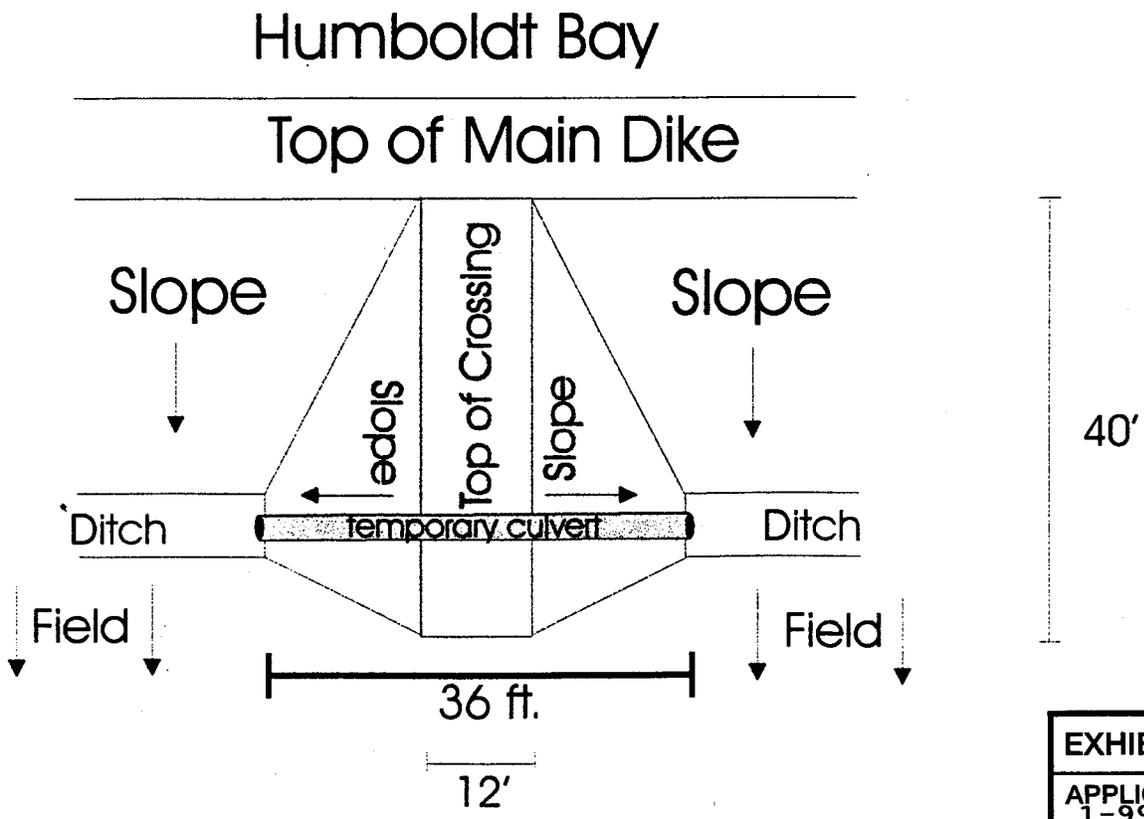
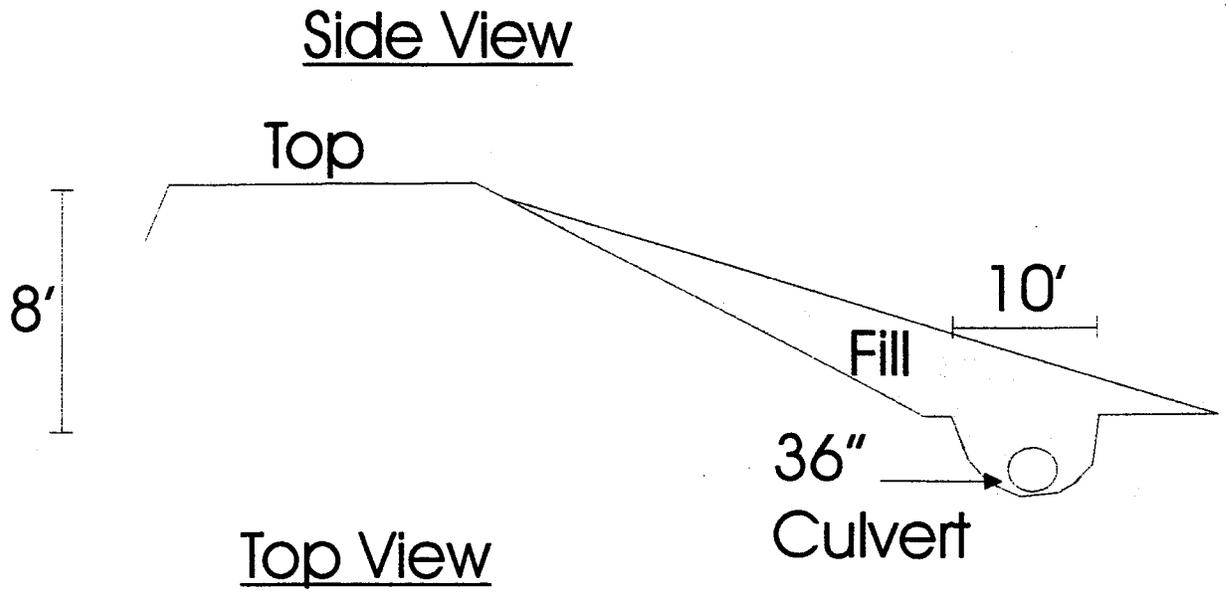
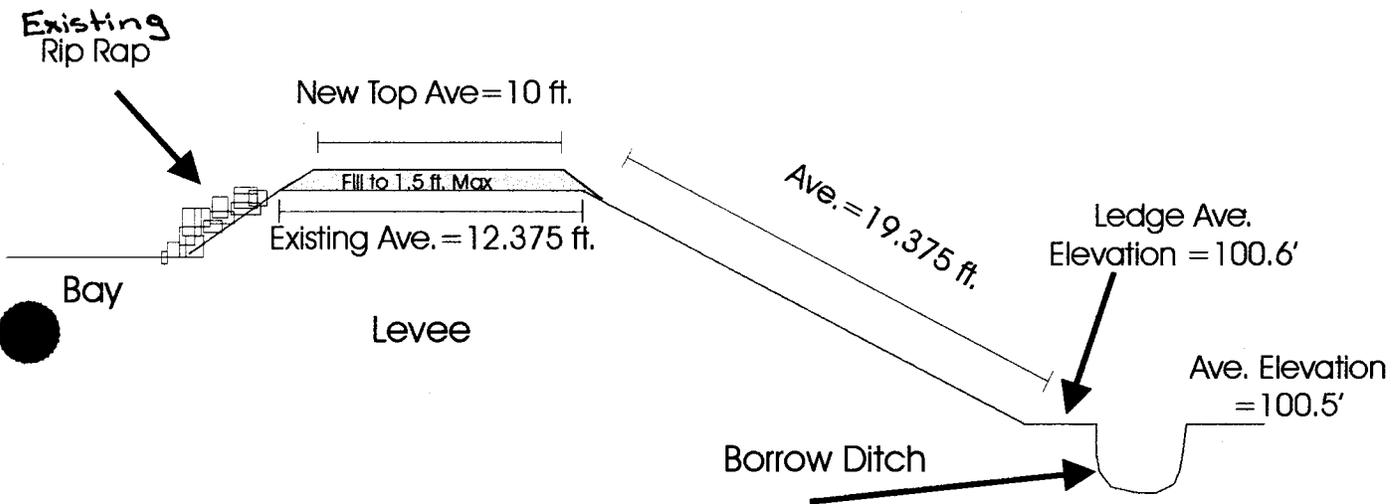


EXHIBIT NO.	9
APPLICATION NO.	1-99-063
DFG	
TEMPORARY DIKE ACCESS	

Mad River Wildlife Area Main Levee Typical Cross Section



Note: These are averages within the work area only and do not represent levee averages outside of the work area

Note: Drawings not to scale

EXHIBIT NO.	10
APPLICATION NO.	1-99-063
DFG	
LEVEE FILL (TYPICAL)	

